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PREFACE

This document has been prepared as a model needs assessment study. In order to rationally allocate resources to future health care programs, the veterans' need for special services, such as nursing home care, must be assessed. This document provides a comprehensive guide for performing such studies.

The population projections used to forecast the VA nursing home census in this report were not based on current migration patterns. Thus, while the actual nursing home census projections in this report should not be used for planning, the general methodology can be used for central planning by program officials and for grassroots planning in the field. Population projections which do incorporate current migration patterns will be available to the field for use in the MEDIPP process.

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I. EXECUTIVE SUMMARY

This study of Nursing Home Care (NHC) needs was designed to provide a quantitative and social assessment of NHC needs of veterans in the year 1990. The study addressed the following issues:

- How many veterans will need NHC in 1990?
- Where will the veterans requiring NHC be located in 1990?
- Can reasonable projections of bed needs be provided to the planners in the VA's 28 districts?
- Can social, economic and psychological factors be identified which affect the NHC needs of veterans?
- What other developments could affect the assessment in the near future?

The central findings of the study are as follows:

- The utilization rate of veterans in nursing homes is age-dependent and has increased in all four census regions. (Northeast, North Central, South, and West). Social and economic factors appear to be causing this increase in utilization.
- The North Central region has the highest utilization rates of all the regions.
- The largest proportional increase in utilization rates from 1967 to 1977 is seen in the youngest age groups (35-44 and 45-54). This trend is consistent across all four regions.
- At the approximate age of 80, the utilization rate increases significantly compared to older and younger age groups.
- The veteran population increased approximately 10% in the historical study period (1969-1977). The estimated census, or numbers, of veterans in NHC for that same 8-year period increased approximately 120%.
- In 1969 the 85-94 age group had the sixth largest number of veterans in the NHC census, in 1973-74 this group had the fourth largest number, and by 1977 it had moved into third place.

- Traditionally, the VA provides NHC for only a portion of the veteran population requiring such care. In 1969 the VA percentage, or share, was 17.8% of the total census. The percentage decreased steadily to 16.3% in 1977.

- One of the significant issues in the study was the investigation of the migration patterns of veterans in the next 10 to 20 years. No known report on this matter of migration has been published in a "peer reviewed" journal or other publication. In the absence of any published literature, a series of socioeconomic and psychological profiles on those who migrate and those who do not has been constructed.

  An analysis of the profiles indicates that veterans who are typically found in VA supported Nursing Homes do not tend to migrate. Significant factors associated with migration or nonmigration are educational level, income level, immediate family, psychological support system, and proximity of the extended family.

- A majority of VA NHC patients are actually housed in designated NHC facilities. A survey was undertaken of those patients requiring NHC who were housed in VA hospitals (approximately 6,000 cases). This group could be placed in nursing homes. (The 6,000 cases have not been integrated into the data in any of the tables in the report.) Thus, the projections developed in this study exclude the extra utilization which would occur if nursing home patients in VA hosptials were placed in NHC under VA auspices.

The section on District allotments deals with the estimated census of veterans in each of the 28 VA districts who require NHC. Suggested VA shares are also considered. Three Scenarios are proposed which incorporate the estimated census, shares, and migration patterns.

Scenario I employs a methodological approach based on utilization rate projections. Scenario II is also based on utilization rates in part but also involves graphic interpretations and analyses of several social factors as well. Scenario III represents a synthesis of Scenarios I and II.

The highlights of the District allotments are as follows:

- The national estimated census in Scenario I indicates that approximately 353,000 veterans are projected to need NHC facilities in 1990, regardless of source of care. Under Scenario II, approximately 434,500 veterans are projected to need the facilities. Under Scenario III, the total projection is approximately 382,000.

- If the VA supports at least 16% of the census totals, which is estimated to have been VA's share in 1977, the demand for beds will be as follows:

  Scenario I - 56,500
  Scenario II - 69,500
  Scenario III - 62,600

Preliminary reports of current research programs have been made available for review. These are joint VA-Academic research programs. Early indications suggest a common theme that more behavioral and mental health patients could be housed in an NHC environment. This would significantly increase the population in NHC facilities. Final results of these research programs are expected in 1 to 2 years.

More than 40 consultants from other federal agencies, private consulting firms, academia, associations and individual researchers provided comments, critiques, and reference materials. Overall, they collectively provided the "peer review" of methodology and the findings of this report.

II. INTRODUCTION

The VA's Nursing Home Care program began on August 23, 1963, when the President directed that 2,000 nursing home care beds be created within the VA medical system. One year later, Public Law 88-450 was enacted, which:

- Authorized 4,000 VA NHC beds,
- Permitted the transfer of veterans who had reached maximum hospital benefit to Community Nursing Homes, and
- Allowed the VA to support the construction of State Nursing Home Care Units through a grants in aid program.

These programs continue to operate today.

PL 94-581, enacted on January 19, 1976, required the VA to review its medical care program with reference to the increasing average age of the veteran population.

On March 22, 1976, the Deputy Chief Medical Director instructed the Planning Service of the VA to undertake an analysis of the nursing home care needs of the veteran population in the year 1985. That report was completed in June 1977.

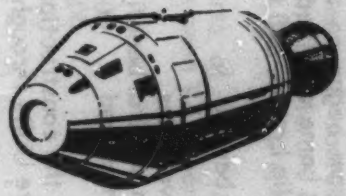
Our prime concern in this report is to project the number of veterans needing nursing home care in 1990. The medical districts can use these estimated figures to plan for meeting their needs in 1990. These projections form the basis for our suggested district allotments of NHC beds in 1990.

Although the allotments are primarily based on current data, other sources of information on American population growth have been reviewed. It will be shown that the recent data is well within the patterns of American population growth.

The data collected, generated, and analyzed for this report is from the American Revolutionary Period to the 21st Century.

1776

2000



III. CHARACTERISTICS OF THE NURSING HOME CARE PROGRAM

Nursing home care is defined as the accommodation of convalescent or other persons who are not acutely ill and not in need of hospital care, but who nevertheless require skilled nursing care and related medical services.

The objectives of the VA NHC program are to provide:

- skilled nursing care;
- related medical services;
- adjustment services for the individual;
- social, recreational, and spiritual activities; and
- a dignified and homelike environment for these services.

IV. INTRODUCTION TO THE HISTORICAL TABLES

The key assumption underlying the methodology used in this study is that meaningful predictions into the future are based upon proper assessment of historical data.

Tables 1-8 are largely based on data for the years 1969, 1973-74, and 1977. These data are abundant and reliable, so that even 1981 publications rely on them for current health care analysis. They were collected by the Bureau of the Census and the National Center for Health Statistics (NCHS).

Projections of the future needs for NHC are developed from the observed utilization increases in the 8-year period from 1969 to 1977. Many of the tables in this historical section are based on utilization of U.S. nursing homes by male civilians. It is assumed that patterns of civilian utilization of nursing homes provide an acceptable basis for projecting patterns of utilization by veterans. There is no known study that challenges this assumption.

At this point it is appropriate to mention the planning procedures used to determine the NHC needs of women veterans in 1990. It has been difficult to construct acceptable planning models for women veterans because data on (a) age patterns, (b) current residental patterns, (c) geographic distribution, and (d) suitable NHC facilities in 1990 are not available. These data are available for the male population but there are marked differences between the sexes in regard to their need for NHC. For example, a much higher number of women are found in the 90+ age group. Thus, the planning model used to project NHC needs for the male veterans cannot be used for female veterans.

Despite problems with data availability, a "best approximation" of NHC need for women veterans has been developed. Based upon advice and concensus of several members in Extended Care (18) in Central Office, other health care personnel in Central Office, and personnel in various VA medical centers, it was agreed that one and one-half percent of the projected NHC beds for 1990 be allotted to female veterans. It is assumed that the distribution of female veterans by district is similar to male veterans.

In general, the data provided by the National Center for Health Statistics are represented by the numerator. The data provided by the Bureau of the Census are represented by the denominator. The numerator divided by the denominator is the utilization rate.

Table 1

NURSING HOME UTILIZATION BY MALE CIVILIANS: CENSUS

Scope: National, Three Study Periods

AGE	NATIONAL		
	1969	1973/74	1977
35-44	8,930	11,948	18,021
45-54	9,965	13,059	19,821
55-64	21,591	27,396	42,653
65-74	47,493	65,139	79,351
75-84	82,228	114,140	120,882
85-94	55,529	77,577	81,607
95+	6,272	8,888	9,214
Total	232,008	318,135	371,549

Table 1: Nursing Home Utilization by Male Civilians: Census Scope: National, Three Study Periods

Description

This table shows historical patterns of NHC utilization for the U.S. male population. NHC utilization patterns in later tables are based largely on male civilian utilization. The table displays the national nursing home census for three study periods; 1969, 1973/74, and 1977.

The census represents the best available estimate of the numbers of male civilians in all nursing homes in the United States, including care provided under VA auspices. In applying these civilian patterns of utilization to the veteran population, it should be noted that most veterans are found in civilian nursing homes and that only a minor percentage, approximately 16%, are found in nursing homes supported by the Veterans Administration.

The ages of the patients found in nursing homes, as represented by the civilian data, are most important in utilization studies because so many measures of health relate to age.

Highlights

- There was a steady increase in the number of male civilians in nursing homes over the three study periods.
- The data show a consistent pattern of increased utilization with age and with time.
- The median age is approximately the same in each of the censuses .
- The 35-44 age group shows a 102% increase in utilization, the 95+ group a 47% increase.

Comments on Reference Materials

The National Center for Health Statistics classified Nursing Homes by the level of medical service. Only the data comparable to the VA definition of NHC were used for the civilian model.1/

The NCHS 1977 National Survey provided the major body of data for the study in 1980-81.2/

A study of five of the most populated states provided supplementary data for 1977.3/

The NCHS provided the VA with a unique printout on civilian males to the age of 95 and above.4/

Two publications of the Bureau of Census provided projections of National population bases.5/ 6/

A Bureau of Census publication and a separate note on handling the data were helpful in determining older age distributions.7/ 8/

Table 2

NURSING HOME UTILIZATION BY MALE CIVILIANS: CENSUS

Scope: Regional, Northeast and North Central

Age	Northeast			North Central		
	1969	1973-74	1977	1969	1973-74	1977
35-44	831	810	1,437	3,884	4,470	6,032
45-54	1,284	1,252	2,236	4,466	5,140	6,950
55-64	5,437	5,304	9,304	7,832	9,014	12,195
65-74	9,135	12,355	14,381	17,753	22,808	26,045
75-84	16,860	23,830	23,175	29,088	40,213	44,333
85-94	11,791	16,664	16,293	21,725	30,032	33,179
95 +	1,350	1,908	1,870	1,788	2,472	2,740
Total	46,688	62,123	68,696	86,536	114,149	131,473

Table 2

NURSING HOME UTILIZATION BY MALE CIVILIANS: CENSUS

Scope: Regional, South and West

Age	South			West		
	1969	1973-74	1977	1969	1973-74	1977
35-44	2,459	3,687	6,097	1,756	2,981	4,455
45-54	2,459	3,687	6,205	1,756	2,981	4,430
55-64	5,329	7,988	13,439	2,993	5,078	7,715
65-74	13,352	17,727	23,905	7,253	12,249	15,019
75-84	24,103	30,491	36,153	12,177	19,606	17,223
85-94	13,218	16,721	19,839	8,795	14,160	12,296
95 +	1,555	1,967	2,498	1,579	2,541	2,106
Total	62,475	82,268	108,136	36,309	59,595	63,244

Table 2: Nursing Home Utilization by Male Civilians: Census Scope: Regional, Three Study Periods

Description

The data in Table 1 are now divided into the four national regions formulated by the Bureau of the Census of the Department of Commerce and used by the National Center for Health Statistics. The four geographical regions tend to show internal consistency in terms of social, economic and political characteristics. A diagram of the regions is presented on the following page.

Table 2 shows regional utilization for male civilians by age and study period. The methodology concerning the development of this table and other tables will be found in a later section on methodology.

Highlights

Like Table 1, Table 2 shows several patterns in the data:

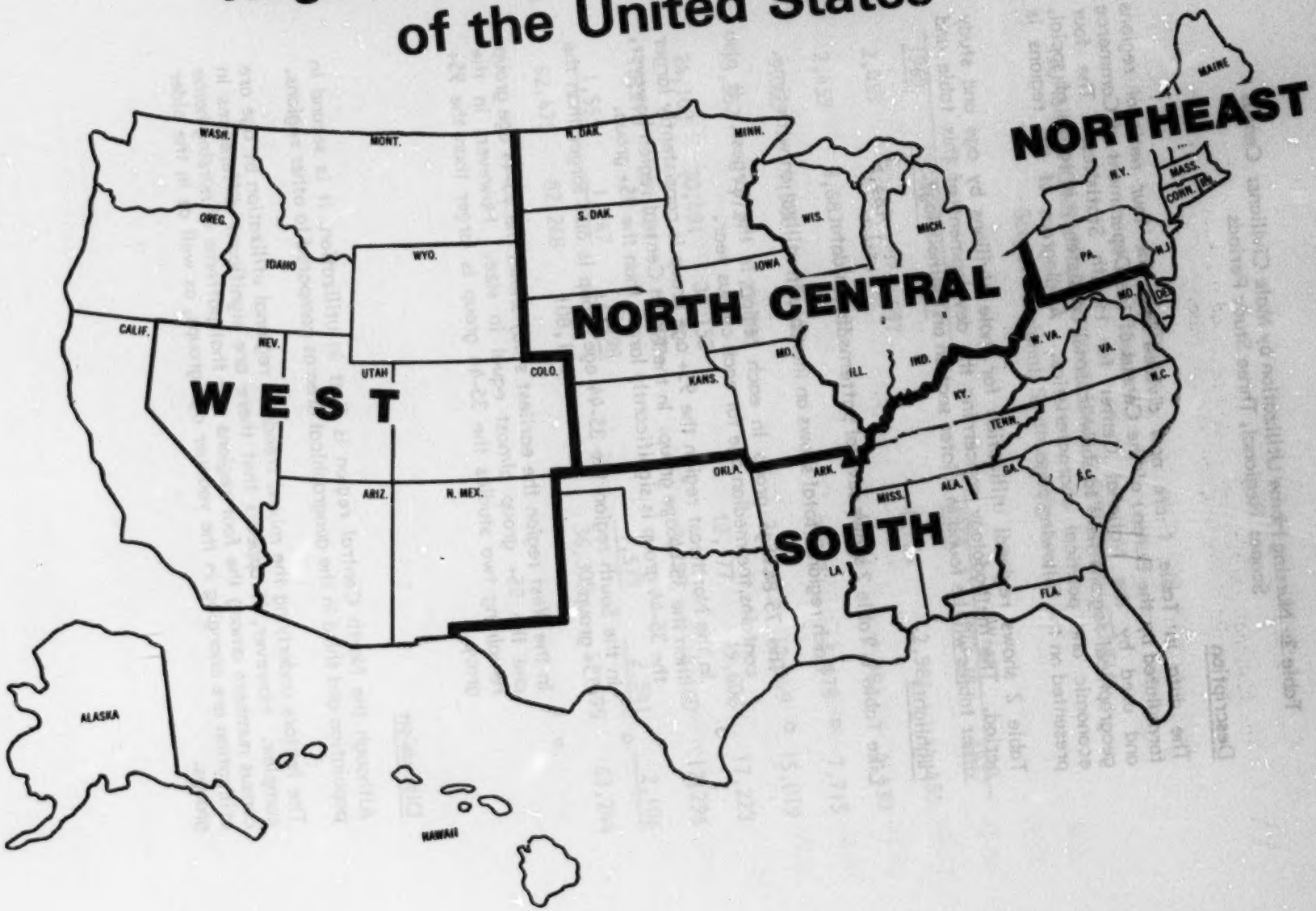
- Each regional total shows an increase in utilization with time.
- The 75-84 age group in each region is the largest. It also contains the median age for each census year.
- In the Northeast region the 95+ age group is consistently larger than the 35-44 age group. In the North Central region however, the 35-44 group is significantly larger than the 95+ group.
- In the South region the 35-44 age group is also larger than the 95+ group.
- In the West region the earliest study shows the 35-44 age group and the 95+ group almost equal in size. However, in the remaining two studies the 35-44 group is larger than the 95+ group.

Discussion

Although the North Central region is first in utilization, it is second in population and third in the geographical area as compared to other regions.

The factors underlying the mixed trends in regional utilization by age are complex. However, it appears that there are significant differences in census numbers among the four regions and that patterns of nursing home utilization are changing in the younger age groups, as well as in the older groups.

Regions and Geographic Divisions of the United States



Comments on Reference Materials

The National Institutes of Health provided a special printout of national population data by region, age, sex, and race.9/

Two publications of the Bureau of Census provided projections of national population bases.10/ 11/

Table 3

NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS

Scope: Northeast Region, Three Study Periods

Age	1969 Census	1969 Pop. (000)	1969 Rate	1973-74 Census	1973-74 Pop. (000)	1973-74 Rate	1977 Census	1977 Pop. (000)	1977 Rate
35-44	831	2,766	.3	810	2,618	.3	1,437	2,598	.6
45-54	1,284	2,876	.4	1,252	5,489	.2	2,236	2,756	.8
55-64	5,437	2,283	2.4	5,304	2,362	2.2	9,306	2,422	3.8
65-74	9,135	1,381	6.6	12,355	1,414	8.7	14,381	1,472	9.8
75-84	16,860	583	28.9	23,860	599	39.8	23,175	612	37.9
85-94	11,741	138	85.2	16,664	142	117.1	16,293	145	112.0
95 +	1,350	7	185.3	1,908	7	254.8	1,870	8	244.3

Table 3

NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS

Scope: North Central Region, Three Study Periods

Age	1969			1973-74			1977		
	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate
35-44	3,884	2,229	1.7	4,470	2,145	2.1	6,032	2,157	2.8
45-54	4,466	2,235	2.0	5,140	2,249	2.3	6,950	2,188	3.2
55-64	7,832	1,723	4.5	9,014	1,790	5.0	12,195	1,850	6.6
65-74	17,753	1,023	17.3	22,808	1,062	21.1	26,045	1,103	23.6
75-84	29,008	445	63.9	40,213	463	86.8	44,333	475	93.4
85-94	21,725	108	200.9	30,032	110	272.8	33,179	113	294.0
95 +	1,788	6	314.0	2,472	6	426.6	2,740	6	461.6

Table 3

NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS

Scope: South Region, Three Study Periods

Age	1969			1973-74			1977		
	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate
35-44	2,459	3,418	.7	3,687	3,486	1.1	6,097	3,647	1.7
45-54	2,459	3,313	.7	3,687	3,465	1.1	6,205	3,493	1.8
55-64	5,329	2,640	2.0	7,988	2,806	2.9	13,439	2,948	4.6
65-74	13,352	1,694	7.9	17,727	1,907	9.3	23,905	2,059	11.6
75-84	24,103	687	35.1	30,491	757	40.3	36,153	817	44.3
85-94	13,218	163	81.0	16,721	144	116.2	19,839	194	102.3
95 +	1,555	8	181.1	1,967	9	207.7	2,498	10	244.6

Table 3

NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS

Scope: West Region, Three Study Periods

Age	1969			1973-74			1977		
	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate
35-44	1,756	2,000	.87	2,981	2,055	1.5	4,455	2,187	2.0
45-54	1,756	1,950	.9	2,981	2,022	1.5	4,430	2,038	2.2
55-64	2,993	1,442	2.1	5,078	1,567	3.2	7,715	1,669	4.6
65-74	7,253	853	8.5	12,249	956	12.8	15,019	1,051	14.3
75-84	12,177	373	32.7	19,606	403	48.7	17,223	434	39.7
95-94	8,795	89	99.3	14,160	96	148.0	12,296	103	119.3
95 +	1,579	5	338.7	*	*	*	2,106	5	388.3

Table 3: Nursing Home Utilization Rates by Male Civilians
Scope: Regional, Three Study Periods

Description

In Tables 1 and 2 the actual census figures for male civilians in nursing homes are displayed for the three study periods. In Tables 3 and 4 the utilization rate of nursing homes is presented per 1,000 male civilians and specific utilization rates are determined for each 10-year age block. These age-specific utilization rates are important because the likelihood of needing nursing home care is closely linked to age, as is evident by the variance in the age-specific rates. Further, age-specific rates allow the analyst to examine and compare trends. By calculating age-specific rates, rather than an overall rate, the different patterns of utilization that various age groups exhibit can be developed.

Age-specific utilization rates can be applied to future population projections. These rates can be adjusted for anticipated shifts in patterns of demand and utilization. Thus, the utilization rate will be used with other statistics in this report to project the future nursing home requirements of the VA.

Utilization rates were developed on data from the Bureau of Census and the National Center for Health Statistics.

Highlights

- The utilization rate increases directly with age in each of the four regions.
- The age-specific utilization rates, within each region, increase over the three study periods. (It will be shown later that this phenomenon is a response to a complex interaction of social, economic, and other factors.)
- The North Central region shows the highest age-specific utilization rates of all four regions.
- The utilization rates in the other three regions are similar.
- At the approximate age of 80, the utilization rate increases disproportionately, as compared with the increases observed between other age groups.
- The largest proportional increase in utilization rates from 1969 to 1977 is seen in the youngest age groups (35-44 and 45-54). This trend is fairly consistent across all four regions.

Discussion

Overall national increases in nursing home utilization can be attributed to a number of factors.12/ An important underlying causal factor is the advancement of biomedicine, which has led to increased life expectancies at older ages. Mortality in persons 85 years old and over declined between 1966 and 1977. This decline in mortality is largely attributed to a sharp decrease in cardiovascular diseases, which are more common in the aged.13/ This leaves a much larger number of surviving elderly in need of nursing home care.

The aging of the population in general has led to an increase in the proportion of the population that is elderly. In 1900, 4.1% of the total U.S. population was over 65, in 1977 the proportion increased to 10.8%, and by 2000 it is projected that 12% of the total population will be over 65 years old.14/ This change in the population's age structure is particularly relevant to the VA. As a subpopulation, the veteran population is aging faster. Thus, as the proportion of elderly veterans increases, the VA will experience a strain on its long term care institutions. The VA may well experience this strain in advance of the nation.

Comments on Reference Materials

- The proportion of the U.S. population aged 65 or older has risen steadily and will continue to rise.14/ 15/
- The trend of treating psychiatric patients in a NHC environment will contribute to increased utilization of nursing homes.16/

Table 4

OVERALL NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS, BY REGION

Scope: Regional, Three Study Periods

	1969	1973/74	1977
Northeast	4.7	6.2	6.9
North Central	11.1	14.6	16.6
South	5.2	6.5	8.2
West	5.4	8.4	8.4

Table 4: Overall Nursing Home Utilization Rates per 1,000 Male Civilians
Scope: Regional, Three Study Periods

Description

The high utilization rates shown by the North Central region are too consistent to be dismissed as an aberration. Various approaches to the data indicate a difference between this region and the other three regions.

Highlights

- Overall utilization rates are consistently highest in the North Central region.
- The average nursing home utilization rate for the North Central region increased about 50% from 1969 to 1977.

Discussion

As discussed, there are a number of factors which help to explain the regional increase in the utilization of nursing home care from 1969 to 1977. Table 4 clearly indicates that the magnitude of utilization increase has not been occurring evenly in each region. There is a striking difference between the utilization rates for the North Central region and the rates for the other three regions, which are all clustered at a lower level.

The response to the demand for nursing home care is evident by the numbers of nursing home beds available in the North Central region. Minnesota, Wisconsin, and Nebraska, all in the North Central region, have the largest number of nursing home beds per 1,000 elderly.17/

Table 5

NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS

Scope: National, Three Study Periods

Age	1969			1973-74			1977		
	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate	Census	Pop. (000)	Rate
20-44	8,930	32,482	.3	11,948	35,358	.3	18,021	38,064	.5
45-54	9,965	11,251	.9	13,059	11,506	1.1	19,821	11,327	1.7
55-64	21,591	8,828	2.4	27,394	9,209	3.0	42,653	9,650	4.4
65-74	44,493	5,459	8.2	65,139	5,883	11.1	79,351	6,336	12.5
75-84	82,228	2,450	33.6	114,140	2,506	45.5	120,882	2,578	46.9
85-94	55,529	472	117.6	77,577	551	140.8	81,607	622	131.2
95 +	6,272	25	250.6	*	*	*	9,214	35	263.2
Total Census & Overall Rate	232,008	60,967	3.8	309,257	64,015	4.8	371,549	68,612	5.4

*Insufficient data to calculate the utilization rate.

Table 5: Nursing Home Utilization Rates Per 1,000 Male Civilians
Scope: National, Three Study Periods

Description

Table 5 focuses on national patterns of utilization.

The age-specific national census data are derived by adding the census data from all four regions. (The national nursing home census is also shown in Table 1.) The census data, divided by the population base for each age group, gives the rate of utilization.

Nursing home census data indicate that younger men are utilizing nursing home care at an increasing rate. Therefore, in Table 5 an additional age category has been introduced to accommodate males in the 20-44 age group. Although the data on these younger patients are not as numerous or reliable as data on older patients, the substantial numbers of younger patients warrant the inclusion of the best available information on the group.

Highlights

- Utilization rates by age group increase with each successive study period.

- As expected, the reliability of the utilization rates is good through the age group 75-84, which includes the median age of patients in nursing homes, and then the reliability of the data decreases because of dwindling numbers of nursing home patients.

Discussion

While health factors largely determine utilization rates for nursing home care, a variety of other factors contribute to the increase of utilization from 1969 to 1977.

Table 6

NURSING HOME UTILIZATION BY ALL VETERANS
ESTIMATED NATIONAL CENSUS

Scope: National, Three Study Periods

	1969			1973-74			1977		
Age	Male Civ. Rate	Vet. Pop. (000)	Est. Census	Male Civ. Rate	Vet. Pop. (000)	Est. Census	Male Civ. Rate	Vet. Pop. (000)	Est. Census
20-44	.3	13,740	4,122	.3	13,179	3,954	.5	12,551	6,276
45-54	.9	8,540	7,686	1.1	9,103	10,013	1.7	8,185	13,915
55-64	2.4	2,603	6,247	3.0	4,810	14,430	4.4	6,638	29,207
65-74	8.2	1,246	10,217	11.1	1,013	11,244	12.5	1,482	18,525
75-84	33.6	763	25,637	45.5	1,032	46,956	46.9	742	34,800
85-94	117.6	14	1,646	140.8	76	10,701	131.2	142	18,630
95 +	250.6	1	251	*	*	*	263.2	8	2,106
Total Census & Overall Rate	2.1	26,907	55,806	3.4	29,213	97,298	4.2	29,748	123,459

*Insufficient data to calculate the utilization rate.

Table 6: Nursing Home Utilization By All Veterans:
Estimated National Census
Scope: National, Three Study Periods

Description

National nursing home utilization by male civilians was shown in Table 5. In Table 6 the transition is made from civilian to veteran population data. The age-specific male civilian rate is combined with the age-specific veteran population data to provide an estimated national census of veterans in nursing homes. The VA's share of this estimated total is designated as the share for the agency.

The procedures used in the tables thus far provide both salient information and analytical techniques. These now form the basis for estimating past and future veteran nursing home demand. An important assumption is that veterans generate a demand for nursing home care at the same rate as all male civilians. Extending this assumption, it follows that the utilization rate for civilians may be regarded as the utilization rate for veterans. Considering the factors which impose a need for nursing home care (discussed in reference to Tables 3 and 4), one can conclude that this assumption is reasonable. There is no known study which would refute this similarity between veterans and male civilians.

Highlights

- The veteran population has incresed by approximately 10% in the 8-year historical study period. However, the estimated census of veterans in nursing homes for the same study period has increased by approximately 120%.
- The aging veteran population accounts for the significant increase of veterans in nursing homes but the number of veterans of all ages has increased only slightly.
- While the largest numbers of patients in nursing homes are estimated to be in the 75-84 age-group, a significant shift has taken place in the 85-94 group. In 1969 this group was in sixth place, in 1973-74 it was in fourth place, and in 1977 it was in third place.

Discussion

In looking at the estimated census figures for veterans in nursing homes between 1969 and 1977, one must keep in mind that the age structure of the veteran population plays an important role in determining these census figures. The veteran population has bulges in its age structure which correlate with the historical patterns of American wars. As these concentrations of veterans from each war period reach the ages at which nursing home care is highly utilized, demand increases. For example, most

of the World War I veterans were 65-75 between 1960 and 1970 and were 75-85 between 1970 and 1980. Those who survive past the age of 85 will be most numerous between 1980 and 1990. World War II, Korean War, and Viet Nam veterans will exhibit similar patterns as they age.20/ Therefore, in examining veteran nursing home demand, two important factors must be kept in mind:

- The veteran population is aging at a faster rate than the U.S. male population.
- The veteran population passes through age groups in waves, reflecting the concentrations of veterans from the four major war eras in this century.

Table 8

VA'S SHARE OF THE TOTAL VETERAN NURSING HOME MARKET

Scope: Medical Districts 1977

Medical District	VA-Supported Census	Est. Total Vet. Census	VA Market Share (%)
1	1,288	4,397	29
2	537	3,147	17
3	749	7,471	10
4	1,328	7,438	17
5	1,038	3,726	27
6	395	3,724	11
7	386	5,051	8
8	544	3,016	18
9	908	3,621	25
10	540	3,226	17
11	269	3,802	7
12	722	6,763	11
13	1,087	10,133	11
14	924	9,808	9
15	594	5,269	11
16	906	5,722	16
17	605	9,763	6
18	449	6,964	7
19	550	3,882	14
20	1,446	7,725	19
21	474	6,405	7
22	335	4,468	7
23	1,282	6,246	21
24	576	3,237	18
25	382	3,184	12
26	805	9,819	8
27	653	6,547	10
28	720	5,231	14

Table 8: VA's Share of the Total Veteran Nursing Home
Scope: Medical District, 1977

A. Description:

It is fruitful for local planners to view the historical estimated percentage of the VA's market share for each of the 28 VA medical districts. As expected, district shares vary, with a clustering in the range of 11 to 18%.

The four census regions (see map) have boundaries which roughly enclose several VA medical districts. The Northeast contains medical districts 1-5, the South contains districts 6-12, 19, and 20; the North Central region contains districts 13-18 and 21-23; and the West contains districts 24-28. There is some overlap of medical districts across regional boundaries.

Discussion

Regional trends are not simple to analyze. Additional observations on district share patterns and district census figures are made in the discussion following Table 11.

V. INTRODUCTION TO THE PROJECTION TABLES

Tables 9-10 involve methodological preocedures which project rates, veteran population data, and census figures from the historical study periods into the future. These projected data provide the basis for calculating district allotments.

The statistics which bridge the historical tables and the future district allotments are discussed in the methodology section.

Table 9

NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS

Scope: Northeast Region, Estimates Projected to 1985, 1990, and 2000

	1977	1985		1990		2000	
Age	Rate	Low Rate	High Rate	Low Rate	High Rate	Low Rate	High Rate
20-44	.6	.6	.9	.6	1.1	.6	1.3
45-54	.8	.8	1.2	.8	1.4	.8	1.7
55-64	3.8	3.8	5.2	3.8	6.1	3.8	7.0
65-74	9.8	9.8	13.0	9.8	15.0	9.8	17.0
75-84	37.9	37.9	46.9	37.9	52.5	37.9	58.1
85-94	112.0	112.0	138.8	112.0	155.6	112.0	172.3
95+	244.3	244.3	303.3	244.3	340.2	244.3	377.0

Table 9

NURSING HOME UTILIZATION RATES PER 1,000 MALE CIVILIANS

Scope: West Region, Estimates Projected for 1985, 1990, and 2000

	1977	1985		1990		2000	
Age	Rate	Low Rate	High Rate	Low Rate	High Rate	Low Rate	High Rate
20-44	2.0	2.0	3.1	2.0	3.8	2.0	4.5
45-54	2.2	2.2	3.5	2.2	4.3	2.2	5.1
55-64	4.6	4.6	7.1	4.6	8.7	4.6	10.2
65-74	14.3	14.3	20.1	14.3	23.7	14.3	27.3
75-84	39.7	39.7	46.7	39.7	51.1	39.7	55.4
85-94	119.3	119.3	139.3	119.3	151.8	119.3	164.3
95+	388.3	388.3	437.9	388.3	468.9	388.3	500.0

Table 9: Nursing Home Utilization Rates per 1,000 Male Civilians

Scope: Regions, Estimates, Projected for 1985, 1990 and 2000

Description

Table 9 has four sections, each representing the regions concept as developed by the Bureau of the Census. The low rate assumes that the 1977 rate of utilization will prevail into the future. The high rate is based on an extrapolation of the rates observed in the three-study survey, allowing the past growth patterns to continue into the future. The average yearly growth between 1969 and 1977 is allowed to continue to 1990, then halved to the year 2000.

Highlight

- The North and South have similar high rates. The pattern of rates in the West is somewhat different from the North and South patterns. The North Central region has noticeably higher rates.

Table 10

NURSING HOME UTILIZATION BY ALL VETERANS:
PROJECTED CENSUS

Scope: National, Projected to 1985

Age	Rate./ 1,000 Pop. Low	Rate./ 1,000 Pop. High	Vet Pop. (000)	Projected Census Low	Projected Census Mid-Point	Projected Census High
20-44	1.8	2.7	11,302	20,771	25,867	30,964
45-54	2.1	3.1	5,233	10,751	13,364	15,976
55-64	4.9	7.0	7,702	37,774	46,013	54,252
65-74	14.9	19.6	4,073	60,526	70,092	79,657
75-84	55.0	69.2	625	34,379	38,812	43,246
85-94	164.1	207.8	216	35,455	40,176	44,878
95 +	339.4	425.2	11	3,733	4,205	4,677
Overall Rate and Total Census	7.0	9.4	29,162	203,409	238,530	273,650

Table 10

NURSING HOME UTILIZATION BY ALL VETERANS: PROJECTED CENSUS

Scope: National, Projected to 1990

Age	Rate./ 1,000 Pop. Low	Rate./ 1,000 Pop. High	Vet Pop. (000)	Projected Census Low	Projected Census Mid-Point	Projected Census High
20-44	1.8	3.3	10,003	18,442	25,846	33,251
45-54	2.1	3.7	5,021	10,527	14,664	18,800
55-64	4.9	8.4	5,956	29,018	39,538	50,059
65-74	14.7	22.3	5,850	86,171	108,377	130,583
75-84	54.8	77.7	1,194	65,471	79,123	92,775
85-94	160.5	228.5	110	17,654	21,393	25,133
95 +	319.5	449.3	6	1,917	2,307	2,696
Overall Rate and Total Census	8.1	12.6	28,141	229,199	291,249	353,298

page

Table 11

NURSING HOME UTILIZATION BY ALL VETERANS: PROJECTED CENSUS

Scope: District, Projected to 1990

Med. Dist.	1977 VA Mkt. Share	1990 Projected Census Low	High	Mid-Point
1	.29	6,365	9,539	7,952
2	.17	4,218	6,312	5,265
3	.10	10,480	15,720	13,100
4	.17	11,080	16,711	13,896
5	.27	5,045	7,605	6,325
6	.11	5,470	8,607	7,039
7	.08	7,262	10,902	9,082
8	.18	3,940	6,286	5,113
9	.25	4,799	7,656	6,227
10	.17	4,747	7,599	6,173
11	.07	4,861	7,617	6,239
12	.11	15,009	23,608	19,309
13	.11	13,885	20,862	17,373
14	.09	13,641	20,496	17,069
15	.11	7,062	10,609	8,836
16	.16	7,343	11,021	9,182
17	.06	13,039	19,558	16,299
18	.07	8,672	13,025	10,849
19	.14	5,080	7,933	6,507
20	.19	10,987	17,396	14,191
21	.07	8,389	12,602	10,496
22	.07	5,931	8,891	7,411
23	.21	7,813	11,717	9,765
24	.18	4,659	7,513	6,085
25	.12	6,107	9,905	8,006
26	.08	15,320	24,618	19,969
27	.10	10,165	16,342	13,253
28	.14	7,828	12,647	10,237
Total		229,199	353,298	291,249

Table 11

NURSING HOME UTILIZATION BY ALL VETERANS: PROJECTED CENSUS

Scope: District, Projected to 2000

Med. Dist.	1977 VA Mkt. Share	2000 Projected Census Low	High	Mid-Point
1	.29	8,731	14,120	11,426
2	.17	5,069	8,185	6,627
3	.10	13,131	21,259	17,195
4	.17	15,328	24,949	20,139
5	.27	6,571	10,843	8,707
6	.11	7,681	12,801	10,241
7	.08	10,520	17,936	14,228
8	.18	5,237	8,920	7,079
9	.25	6,222	10,538	8,381
10	.17	7,193	11,941	9,567
11	.07	6,532	10,902	8,717
12	.11	32,258	52,655	42,456
13	.11	18,627	31,751	25,189
14	.09	18,011	30,700	24,356
15	.11	9,466	26,179	12,823
16	.16	9,839	16,815	13,327
17	.06	17,247	29,397	23,322
18	.07	12,095	20,681	16,388
19	.14	7,079	11,800	9,440
20	.19	15,007	25,069	20,038
21	.07	11,695	19,956	15,825
22	.07	8,712	14,867	11,790
23	.21	11,170	19,042	15,106
24	.18	6,653	11,099	8,876
25	.12	10,834	18,038	14,436
26	.08	20,957	34,349	27,653
27	.10	13,426	22,204	17,815
28	.14	10,939	18,263	14,601
Total		326,230	545,259	435,745

Table 11: Nursing Home Utilization by all Veterans: Projected Census
Scope: National, Projected to 1985,1990 and 2000.

Description

This table shows the summary projections of allotments for each of the medical districts. These figures are part of Scenario I, which will be explained in further detail later. The allotments in this scenario are designated as the High projection. The Low projection is based on the 1977 calculation. The Mid-Pont projection is the midway point between Low and High. The Low and Mid-Point numbers are provided as statistical manipulations only.

The 1977 market share percentages are also shown for each district.

Highlight

- The 1990 "High" Projected Census figures total 353,298. This may be chosen as the Scenario I planning fugure for 1990.

Table 12: VA Supported Nursing Home Utilization:
Five Alternative Sets of Census Projections
Scope: National, Projected to 1985, 1990 and 2000

Description

Five alternative projections are presented. Each assumes that the VA will support a different share of the veteran nursing home market.

1. In the future the VA will support 16% of the total veteran nursing home market.

2. In the future the VA will support 20% of the total veteran nursing home market. The Department of Medicine and Surgery has been following the policy that the VA plan to support 20% of the total nursing home need by the year 2000.

3. In the future the VA will support 35% of the total nursing home market. This figure has no particular significance but is probably a reasonable, although somewhat arbitrary, market share estimate.

4. In the future the VA will support 50% of the total nursing home market. Again, this percentage holds no particular significance.

5. In the future the VA will support 100% of the total nursing home market. It is highly unlikely that the VA will be capable of supporting 100% of the veteran nursing home market. It is also unlikely that all veterans will seek VA-supported nursing home care. This alternative is presented to establish an upper limit on the number of veterans who might seek care in VA-supported nursing homes.

Table 12

VA SUPPORTED NURSING HOME UTILIZATION
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: National, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid-Pt.
1. VA will Support 16% of the Nursing Home Market for All Veterans	32,345	43,784	38,165	36,672	56,528	46,600	52,197	87,241	69,719
2. VA Will Support 20% of the Nursing Home Market for All Veterans	40,682	54,730	47,706	45,840	70,660	58,250	65,246	109,052	87,149
3. VA Will Support 35% of the Nursing Home Market for All Veterans	71,193	95,777	83,485	80,220	123,656	101,937	114,180	190,840	152,510
4. VA Will Support 50% of the Nursing Home Market for All Veterans	101,704	136,825	119,265	114,600	176,649	145,624	163,115	272,629	217,872
5. VA Will Support 100% of the Nursing Home Market for All Veterans	203,409	273,650	238,530	229,199	353,298	291,249	326,230	545,259	435,745

Tables 13-40: VA Supported Nursing Home Utilization:
Five Alternative Sets of Census Projections
Scope: Medical Districts, Projected to 1985, 1990, and 2000

Description

As discussed earlier, the VA supported approximately 16% of the total veteran nursing home population in 1977 (see Table 7). It has been shown that the proportion of all veterans in nursing homes who are housed in VA-supported nursing homes varies among the 28 medical districts. Based on the 1977 market shares for each of the 28 medical districts, five alternatives have been developed which reflect the historical variation among the districts.

The five alternative policies are as follows:

1. In the future the medical district will support 16% of the total veteran population in nursing homes. This is the national market share that was established in 1977.

2. In the future the medical district will support 20% of the total veteran population in nursing homes. This is the national market share proposed as the VA's goal by the year 2000.

3. In the future the medical district will support 35% of the total veteran population in nursing homes. This figure is arbitrary, although plausible.

4. In the future the medical district will support 50% of the total veteran population in nursing homes. Again, this figure is arbitrary.

5. In the future the medical district will support 100% of the total veteran population in nursing homes. This establishes the upper limit on the number of veterans who might seek VA supported care in any given district. It is unlikely that all veterans will seek VA-supported care.

Table 13

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 1 Projected for 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	946	1,241	1,093	1,018	1,526	1,272	1,397	2,259	1,828
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,182	1,551	1,367	1,273	1,908	1,590	1,746	2,824	2,285
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,068	2,714	2,392	2,228	3,339	2,783	3,056	4,942	3,999
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,955	3,878	3,417	3,182	4,770	3,976	4,366	7,060	5,713
5. VA Will Support 100% of the Nursing Home Market for All Veterans	5,911	7,757	6,834	6,365	9,539	7,952	8,731	14,120	11,426

Table 14

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 2, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	658	965	762	675	1,010	842	811	1,310	1,060
2. VA Will Support 20% of the Nursing Home Market for All Veterans	823	1,082	952	844	1,262	1,053	1,014	1,637	1,325
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,440	1,893	1,666	1,476	2,209	1,843	1,774	2,865	2,319
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,057	2,704	2,380	2,109	3,156	2,633	2,534	4,093	3,313
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,114	5,408	4,761	4,218	6,312	5,265	5,069	8,195	6,623

Table 15

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 3, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,606	2,114	1,860	1,677	2,515	2,096	2,101	3,401	2,751
2. VA Will Support 20% of the Nursing Home Market for All Veterans	2,008	2,642	2,325	2,096	3,144	2,620	2,626	4,252	3,439
3. VA Will Support 35% of the Nursing Home Market for All Veterans	3,513	4,624	4,069	3,668	5,502	4,585	4,596	7,441	6,018
4. VA Will Support 50% of the Nursing Home Market for All Veterans	5,019	6,606	5,812	5,240	7,860	6,550	6,565	10,629	8,597
5. VA Will Support 100% of the Nursing Home Market for All Veterans	10,038	13,211	11,625	10,480	15,720	13,100	13,131	21,259	17,195

Table 16

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 4, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,611	2,129	1,870	1,773	2,674	2,223	2,453	3,992	3,222
2. VA Will Support 20% of the Nursing Home Market for All Veterans	2,014	2,661	2,337	2,216	3,342	2,779	3,066	4,990	4,028
3. VA Will Support 35% of the Nursing Home Market for All Veterans	3,524	4,656	4,090	3,878	5,849	4,863	5,365	8,732	7,048
4. VA Will Support 50% of the Nursing Home Market for All Veterans	5,034	6,652	5,843	5,540	8,355	6,948	7,664	12,474	10,069
5. VA Will Support 100% of the Nursing Home Market for All Veterans	10,068	13,304	11,686	11,081	16,711	13,896	15,329	24,949	20,139

Table 17

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 5, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	759	1,003	881	807	1,217	1,012	1,051	1,735	1,393
2. VA Will Support 20% of the the Nursing Home Market for All Veterans	948	1,254	1,101	1,009	1,521	1,265	1,314	2,169	1,741
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,660	2,195	1,927	1,766	2,662	2,214	2,300	3,795	3,047
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,371	3,136	2,754	2,523	3,803	3,163	3,285	5,422	4,353
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,742	6,272	5,507	5,046	7,605	6,325	6,571	10,843	8,707

Table 18

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 6, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	755	1,047	901	875	1,377	1,126	1,229	2,048	1,639
2. VA Will Support 20% of the the Nursing Home Market for All Veterans	944	1,308	1,126	1,094	1,721	1,408	1,536	2,560	2,048
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,651	2,290	1,971	1,915	3,013	2,464	2,688	4,480	3,585
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,359	3,271	2,815	2,735	4,304	3,519	3,841	6,401	5,121
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,718	6,542	5,630	5,470	8,607	7,039	7,681	12,801	10,241

Table 19

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 7, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,033	1,359	1,196	1,162	1,744	1,453	1,683	2,870	2,276
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,291	1,699	1,495	1,452	2,180	1,816	2,104	3,587	2,846
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,260	2,973	2,617	2,542	3,816	3,179	3,682	6,278	4,980
4. VA Will Support 50% of the Nursing Home Market for All Veterans	3,228	4,247	3,738	3,631	5,451	4,541	5,260	8,968	7,114
5. VA Will Support 100% of the Nursing Home Market for All Veterans	6,457	8,495	7,476	7,262	10,902	9,082	10,520	17,936	14,228

Table 20

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 8, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	570	796	683	630	1,006	818	838	1,427	1,132
2. VA Will Support 20% of the Nursing Home Market for All Veterans	712	995	853	788	1,257	1,023	1,047	1,784	1,416
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,246	1,741	1,494	1,379	2,200	1,790	1,833	3,122	2,477
4. VA Will Support 50% of the Nursing Home Market for All Veterans	1,780	2,487	2,134	1,910	3,143	2,557	2,618	4,460	3,539
5. VA Will Support 100% of the Nursing Home Market for All Veterans	3,560	4,974	4,267	3,940	6,286	5,113	5,237	8,920	7,079

Table 21

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 9, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	699	979	839	768	1,225	996	996	1,686	1,341
2. VA Will Support 20% of the Nursing Home Market for All Veterans	873	1,223	1,048	960	1,531	1,246	1,245	2,108	1,676
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,528	2,141	1,835	1,680	2,680	2,180	2,178	3,688	2,933
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,183	3,058	2,621	2,399	3,828	3,114	3,111	5,269	4,190
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,366	6,117	5,241	4,799	7,656	6,228	6,223	10,539	8,381

Table 22

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 10, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	645	903	774	759	1,215	988	1,151	1,911	1,531
2. VA Will Support 20% of the Nursing Home Market for All Veterans	807	1,129	968	949	1,520	1,235	1,439	2,388	1,913
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,412	1,975	1,693	1,662	2,660	2,161	2,517	4,179	3,348
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,016	2,822	2,419	2,374	3,799	3,087	3,596	5,971	4,783
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,033	5,644	4,838	4,747	7,599	6,173	7193	11,941	9,567

Table 23

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 11, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	712	983	848	778	1,219	998	1,045	1,744	1,395
2. VA Will Support 20% of the Nursing Home Market for All Veterans	890	1,229	1,060	972	1,523	1,248	1,306	2,180	1,743
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,558	2,151	1,855	1,701	2,665	2,184	2,286	3,816	3,051
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,226	3,073	2,650	2,430	3,808	3,119	3,266	5,451	4,358
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,452	6,147	5,299	4,861	7,617	6,234	6,332	10,902	8,717

Table 24

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 12, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,440	1,986	1,713	2,401	3,777	3,089	5,161	8,425	6,793
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,800	2,482	2,141	3,002	4,722	3,862	6,452	10,531	8,491
3. VA Will Support 35% of the Nursing Home Market for All Veterans	3,150	4,344	3,747	5,253	8,263	6,758	11,290	18,429	14,860
4. VA Will Support 50% of the Nursing Home Market for All Veterans	4,500	6,206	5,353	7,505	11,804	9,654	16,129	26,328	21,228
5. VA Will Support 100% of the Nursing Home Market for All Veterans	9,001	12,411	10,706	15,009	23,608	19,309	32,258	52,655	42,457

Table 25

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 13, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	2,065	2,717	2,391	2,222	3,338	2,778	2,980	5,080	4,030
2. VA Will Support 20% of the Nursing Home Market for All Veterans	2,582	3,396	2,989	2,777	4,172	3,475	3,725	6,350	5,038
3. VA Will Support 35% of the Nursing Home Market for All Veterans	4,518	5,943	5,230	4,859	7,302	6,080	6,519	11,113	8,816
4. VA Will Support 50% of the Nursing Home Market for All Veterans	6,454	8,490	7,472	6,942	10,431	8,687	9,313	15,875	12,594
5. VA Will Support 100% of the Nursing Home Market for All Veterans	12,908	16.979	14,943	13,885	20,862	17,373	18,627	31,751	25,189

Table 26

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 14, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	2,033	2,672	2,353	2,183	3,279	2,731	2,882	4,912	3,897
2. VA Will Support 20% of the Nursing Home Market for All Veterans	2,541	3,340	2,941	2,728	4,099	3,414	3,602	6,140	4,871
3. VA Will Support 35% of the Nursing Home Market for All Veterans	4,447	5,845	5,146	4,774	7,174	5,974	6,304	10,745	8,524
4. VA Will Support 50% of the Nursing Home Market for All Veterans	6,353	8,350	7,352	6,821	10,248	8,534	9,005	15,350	12,178
5. VA Will Support 100% of the Nursing Home Market for All Veterans	12,706	16,701	14,703	13,641	20,496	17,069	18,011	30,701	24,356

Table 27

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 15, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,046	1,376	1,211	1,230	1,697	1,414	1,515	2,589	2,052
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,308	1,720	1,514	1,412	2,122	1,767	1,893	3,236	2,565
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,289	3,009	2,649	2,472	3,718	3,092	3,313	5,663	4,488
4. VA Will Support 50% of the Home Market for All Veterans	3,270	4,299	3,784	3,531	5,304	4,418	4,733	8,090	6,411
5. VA Will Support 100% of the Nursing Home Market for All Veterans	6,540	8,598	7,569	7,062	10,609	8,836	9,466	16,179	12,823

Table 28

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 16, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,118	1,469	1,293	1,175	1,763	1,469	1,574	2,690	2,132
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,398	1,836	1,617	1,469	2,204	1,836	1,968	3,363	2,665
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,446	3,213	2,829	2,570	3,858	3,214	3,444	5,885	4,664
4. VA Will Support 50% of the Nursing Home Market for All Veterans	3,494	4,590	4,042	3,672	5,511	4,591	4,920	8,407	6,663
5. VA Will Support 100% of the Nursing Home Market for All Veterans	6,988	9,181	8,084	7,343	11,022	9,182	9,839	16,815	13,327

Table 29

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 17, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,947	2,557	2,252	2,086	3,129	2,608	2,760	4,704	3,732
2. VA Will Support 20% of the Nursing Home Market for All Veterans	2,434	3,197	2,816	2,608	3,912	3,260	3,449	5,879	4,664
3. VA Will Support 35% of the Nursing Home Market for All Veterans	4,260	5,594	4,927	4,564	6,845	5,705	6,037	10,289	8,163
4. VA Will Support 50% of the Nursing Home Market for All Veterans	6,086	7,992	7,039	6,520	9,779	8,149	8,624	14,699	11,661
5. VA Will Support 100% of the Nursing Home Market for All Veterans	12,172	15,984	14,078	13,039	19,558	16,299	17,247	29,397	23,322

Table 30

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 18, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,302	1,711	1,506	1,388	2,084	1,736	1,935	3,309	2,622
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,627	2,139	1,883	1,734	2,605	2,170	2,419	4,136	3,278
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,847	3,743	3,295	3,035	4,559	3,797	4,233	7,238	5,736
4. VA Will Support 50% of the Nursing Home Market for All Veterans	4,067	5,347	4,707	4,336	6,513	5,424	6,047	10,341	8,194
5. VA Will Support 100% of the Nursing Home Market for All Veterans	8,134	10,694	9,414	8,672	13,025	10,849	12,095	20,681	16,388

Table 31

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 19, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	735	1,008	872	813	1,269	1,041	1,133	1,888	1,510
2. VA Will Support 20% of the Nursing Home Market for All Veterans	919	1,261	1,090	1,016	1,587	1,301	1,416	2,360	1,888
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,608	2,206	1,907	1,778	2,777	2,278	2,478	4,130	3,304
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,296	3,151	2,724	2,540	3,967	3,254	3,540	5,900	4,720
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,592	6,302	5,448	5,081	7,934	6,507	7,079	11,801	9,440

Table 32

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 20, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the National VA's Market Share for All Veterans (16%)	1,582	2,195	1,889	1,758	2,783	2,270	2,401	4,011	3,206
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,978	2,744	2,361	2,197	3,479	2,838	3,001	5,014	4,007
3. VA Will Support 35% of the Nursing Home Market for All Veterans	3,461	4,802	4,132	3,846	6,089	4,967	5,253	8,774	7,013
4. VA Will Support 50% of the Nursing Home Market for All Veterans	4,944	6,861	5,902	5,494	8,698	7,096	7,504	12,534	10,019
5. VA Will Support 100% of the Nursing Home Market for All Veterans	9,888	13,721	11,804	10,987	17,396	14,192	15,007	25,069	20,038

Table 33

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 21, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,239	1,630	1,435	1,342	2,016	1,679	1,871	3,193	2,532
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,549	2,038	1,793	1,678	2,520	2,099	2,339	3,991	3,165
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,711	3,566	3,138	2,936	4,411	3,673	4,093	6,984	5,539
4. VA Will Support 50% of the Nursing Home Market for All Veterans	3,873	5,094	4,483	4,195	6,301	5,248	5,847	9,978	7,913
5. VA Will Support 100% of the Nursing Home Market for All Veterans	7,746	10,188	8,967	8,389	12,602	10,496	11,695	19,956	15,825

Table 34

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 22, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	852	1,118	985	949	1,423	1,186	1,394	2,379	1,886
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,065	1,398	1,231	1,186	1,778	1,482	1,742	2,973	2,358
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,863	2,447	2,155	2,076	3,112	2,594	3,049	5,204	4,126
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,662	3,495	3,079	2,965	4,445	3,705	4,356	7,434	5,895
5. VA Will Support 100% of the Nursing Home Market for All Veterans	5,324	6,991	6,157	5,931	8,891	7,411	8,712	14,867	11,790

Table 35

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 23, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,165	1,531	1,348	1,250	1,875	1,562	1,787	3,047	2,417
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,456	1,914	1,685	1,563	2,343	1,953	2,234	3,808	3,021
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,549	3,349	2,949	2,735	4,101	3,418	3,910	6,665	5,287
4. VA Will Support 50% of the Nursing Home Market for All Veterans	3,641	4,785	4,213	3,906	5,859	4,882	5,585	9,521	7,553
5. VA Will Support 100% of the Nursing Home Market for All Veterans	7,282	9,569	8,425	7,813	11,717	9,765	11,170	19,042	15,106

Table 36

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 24, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	638	889	764	745	1,202	974	1,065	1,776	1,420
2. VA Will Support 20% of the Nursing Home Market for All Veterans	798	1,112	955	932	1,503	1,217	1,330	2,220	1,775
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,396	1,946	1,671	1,631	2,630	2,130	2,329	3,885	3,107
4. VA Will Support 50% of the Nursing Home Market for All Veterans	1,995	2,778	2,387	2,330	3,757	3,043	3,327	5,549	4,438
5. VA Will Support 100% of the Nursing Home Market for All Veterans	3,989	5,559	4,775	4,659	7,513	6,086	6,653	11,099	8,876

Table 37

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 25, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	699	978	838	977	1,585	1,281	1,733	2,886	2,310
2. VA Will Support 20% of the Nursing Home Market for All Veterans	873	1,223	1,048	1,221	1,981	1,601	2,167	3,607	2,887
3. VA Will Support 35% of the Nursing Home Market for All Veterans	1,528	2,139	1,834	2,137	3,467	2,802	3,792	6,313	5,053
4. VA Will Support 50% of the Nursing Home Market for All Veterans	2,183	3,056	2,620	3,053	4,952	4,003	5,417	9,019	7,218
5. VA Will Support 100% of the Nursing Home Market for All Veterans	4,365	6,113	5,239	6,107	9,905	8,006	10,834	18,038	14,436

Table 38

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 26, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	2,166	3,015	2,591	2,451	3,939	3,295	3,353	5,496	4,424
2. VA Will Support 20% of the Nursing Home Market for All Veterans	2,707	3,769	3,238	3,064	4,924	3,994	4,191	6,870	5,531
3. VA Will Support 35% of the Nursing Home Market for All Veterans	4,738	6,596	5,667	5,362	8,616	6,989	7,335	12,022	9, 678
4. VA Will Support 50% of the Nursing Home Market for All Veterans	6,768	9,423	8,096	7,960	12,309	9,984	10,478	17,175	13,826
5. VA Will Support 100% of the Nursing Home Market for All Veterans	13,537	18,846	16,191	15,320	24,618	19,969	20,957	34,349	27,653

Table 39

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 27, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,444	2,010	1,727	1,626	2,615	2,121	2,148	3,553	2,850
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,805	2,512	2,159	2,033	3,268	2,651	2,685	4,441	3,563
3. VA Will Support 35% of the Nursing Home Market for All Veterans	3,159	4,398	3,778	3,557	5,719	4,639	4,699	7,771	6,235
4. VA Will Support 50% of the Nursing Home Market for All Veterans	4,513	6,282	5,398	5,082	8,171	6,627	6,713	11,102	8,908
5. VA Will Support 100% of the Nursing Home Market for All Veterans	9,027	12,564	10,796	10,165	16,342	13,253	13,426	22,204	17,815

Table 40

NURSING HOME UTILIZATION BY ALL VETERANS:
FIVE ALTERNATIVE SETS OF CENSUS PROJECTIONS

Scope: Medical District 28, Projected to 1985, 1990, and 2000

Alternative Policies For VA's Market Share	1985			1990			2000		
	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.	Low Est.	High Est.	Mid.-Pt.
1. VA Continues to Support the 1977 National VA's Market Share for All Veterans (16%)	1,080	1,501	1,291	1,252	2,024	1,638	1,750	2,922	2,336
2. VA Will Support 20% of the Nursing Home Market for All Veterans	1,350	1,876	1,613	1,565	2,529	2,047	2,188	3,653	2,920
3. VA Will Support 35% of the Nursing Home Market for All Veterans	2,363	3,283	2,823	2,740	4,427	3,583	3,829	6,392	5,110
4. VA Will Support 50% of the Nursing Home Market for All Veterans	3,375	4,690	4,033	3,914	6,324	5,119	5,469	9,132	7,300
5. VA Will Support 100% of the Nursing Home Market for All Veterans	6,751	9,381	8,066	7,823	12,647	10,237	10,939	18,263	14,601

VII. THREE SCENARIOS

In developing projections of NHC needs for each district, it became necessary to understand some national dynamics - the social, economic, and psychological factors - which vitally affect the district projections. These factors appear to affect the estimated number of veterans in 1990 and where they will be located. A body of literature in the social sciences addresses these dynamics and can be used for planning purposes.

Three composite scenarios have been developed to reflect the available statistical data, findings from the social science literature and alternative methodological approaches.

Scenario I projections for 1990 incorporate data and procedures thus far included in Tables 1-40 and related materials. Scenario II is based on a different approach to the projections in 1990 of the estimated number of veterans and where they may be located. Scenario III represents one hypothetical synthesis of Scenario I and II. While other scenarios are possible, these three scenarios appear to represent the most logical choices for the VA.

TABLE 41: Projected 1990 Census Allotments of Veterans in Districts: Two Scenarios
Scope: Districts, Projected to 1990

DISTRICT	SCENARIO I	SCENARIO II
1	9,539	12,131
2	6,312	8,568
3	15,720	21,058
4	16,711	21,927
5	7,605	8,422
6	8,607	11,401
7	10,902	8,295
8	6,286	9,933
9	7,656	11,363
10	7,599	9,282
11	7,617	10,374
12	23,608	15,185
13	20,862	30,708
14	20,496	29,914
15	10,609	15,175
16	11,021	15,034
17	19,558	28,257
18	13,025	18,221
19	7,933	10,011
20	17,396	21,919
21	12,602	17,989
22	8,891	11,128
23	11,717	15,895
24	7,513	8,906
25	9,905	8,867
26	24,618	25,395
27	16,343	18,194
28	12,647	13,917
Total	353,298	434,500

Table 41: Projected 1990 Census Allotments of Veterans in Districts:
Scope: Districts, Projected to 1990

Description

The census of veterans requiring NHC in the 28 districts is shown in Table 41. Scenario I figures are obtained from Table 11, 1990, high estimates.

Scenario I is based on utilization rates projected from historical data bases (shown in Tables 9-10). Data for the Scenario I district allotments have been derived from a program supplied by the Office of Reports and Statistics the VA. Scenario I does not include the recent findings from the social sciences literature.

Scenario II is based on utilization rates projected from historical data bases and other methodologies. Graphic approaches to historical data were used to project utilization rates and subsequent census figures. Extensive use was made of research on the social dynamics that affect both the numbers and geographical placements of veterans in 1990. (Additional comments on the methodology of Scenario II are found in the methodology section.)

The total census estimate for Scenario II is approximately 20% more than for Scenario I. (See a previous Veterans Administration publication for an earlier census estimate) 18/. A review of over 100 published reports and consultations with almost 40 professionals in the social sciences strongly suggests that current utilization rates projected into the future may well be underestimated. Unfortunately, many social research findings are difficult to quantify into an estimated future census.

Another difference between Scenarios I and II concerns the geographic location of veterans in 1990 through migration patterns. Scenario I shifts large numbers of veterans from the colder district environments to the warmer district environments, whereas Scenario II exhibits only minor shifts of veterans from the colder to the warmer district environments.

To illustrate the differences in migration patterns between the two scenarios, the allotments of selected test districts have been divided into the scenario's total census. For example, District 3, the New York City area, has 15,720, or 4.4%, of the census total of 353,298 veterans in Scenario I. District 3 has 4.8% of 434,500 in Scenario II. (The comparison of percentages of the total is the critical factor.)

An analysis has shown that the scenarios would have the following effects: Scenario I would shift a higher percentage of the veterans out of District 3 (by virtue of its lower percentage). Scenario II would retain more veterans in the New York City area.

The following selected comparisons indicate that district percentages in warmer environments are higher in Scenario I, whereas district percentages in cooler environments are higher in Scenario II.

District	Scenario I	Scenario II
Snowbelt		
3	4.4%	4.8%
17	5.5%	6.5%
18	3.7%	4.2%
Sunbelt		
12	6.6%	3.5%
26	7.0%	5.8%

Scenario I assumes a larger migration movement from the Snowbelt to the Sunbelt. Scenario II assumes little migration from Snowbelt to Sunbelt. The difference between the two scenarios is significant.

Further comments on the methodology used to arrive at these Scenarios are found in the methodology section.

VIII. SOCIAL FACTORS AND INSTITUTIONALIZATION

It has been stated that "the VA faces a demographic trend that is an overriding feature ... and must dominate our future plans (for health care). In the next four years some two million veterans will reach the age of 65." 19/ The sheer number of those turning 65 prompts one health care researcher to comment that this factor alone will inevitably increase institutional care.20/

The aging veteran, like the nonveteran, will be exposed to numerous health problems which will be "marginal" in the sense that the veteran can either remain at home or enter a nursing home. Social factors toward or away from institutionalization to a degree only now being appreciated. A recent publication of the U.S. Bureau of Census cites the necessity of monitoring demographic, social, economic, and psychological factors in the future in the matter of institutionalization.21/

Two recent research publications report several social factors which would precipitate institutionalization. While both reports are based on civilian populations, the findings are applicable to veterans as well.

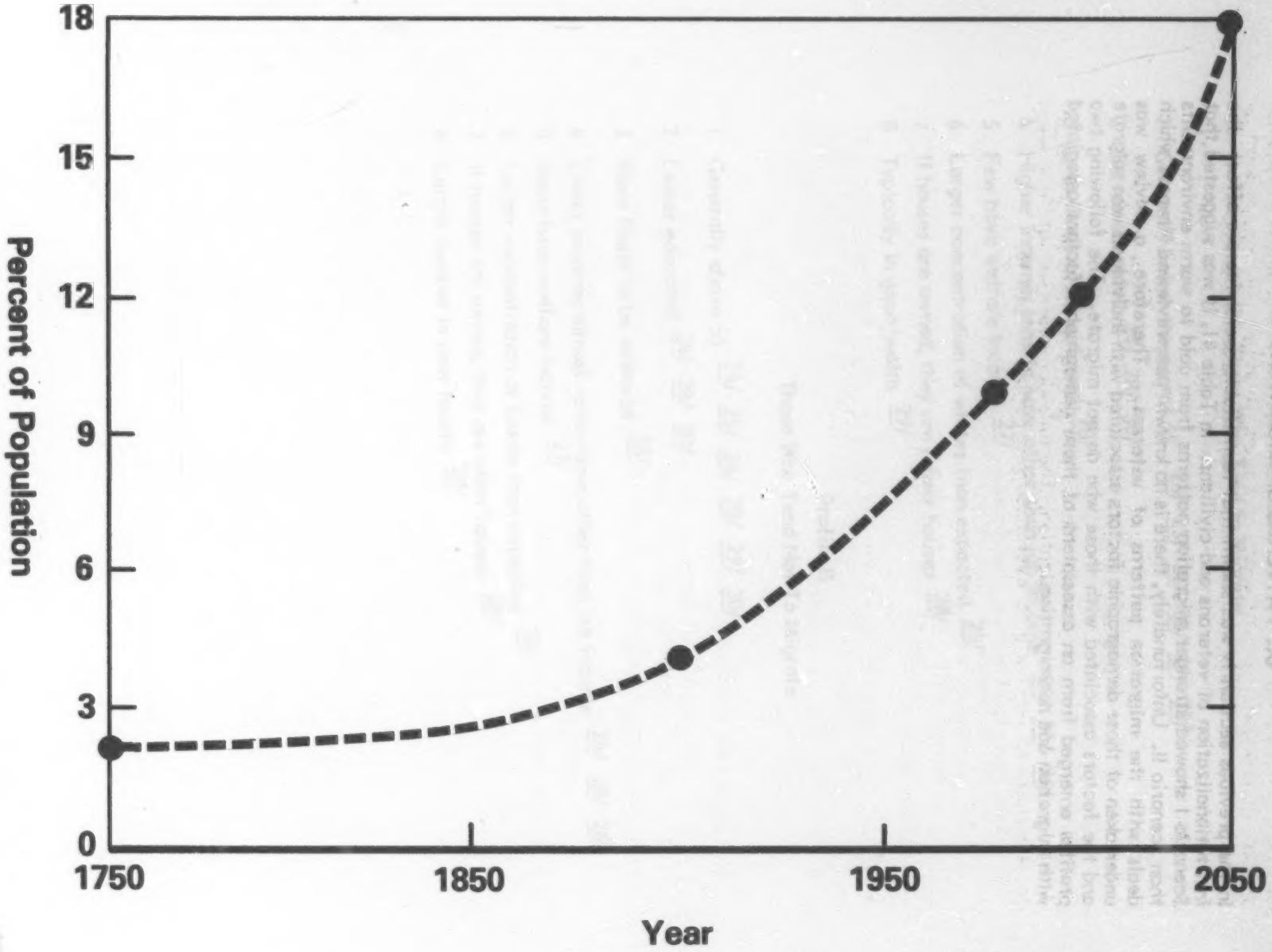
According to investigations conducted by the Social Security Administration, several factors affect the institutionalization of aged welfare recipients: 22/

- "Self-care ability was the single most powerful predictor of institutionalization." Psychological factors were noticeably dominant in causing institutionalization.
- "Age was closely associated with higher probabilities of institutionalization."
- "Persons living alone were more likely to enter nursing homes than persons living with relatives or a spouse." Social factors are evident in the move to nursing homes.
- "The fact is that individuals with a greater number of children living closer to them were less likely to be institutionalized."
- "Northeasterners were more than twice as likely to be institutionalized as southerners. The fact that Medicaid payments were generally lower in the South than in other parts of the country may account for the difference."

Another social factor that affects institutionalization also deals with family structure. 23/ Traditionally women have been the caregivers, but as the role of women has changed in recent years, so has this tradition. It is reported that fewer young women, daughters, and granddaughters are available to provide care for elderly grandparents and relatives. "Institutional services remain, in many cases, the only choice for the family."

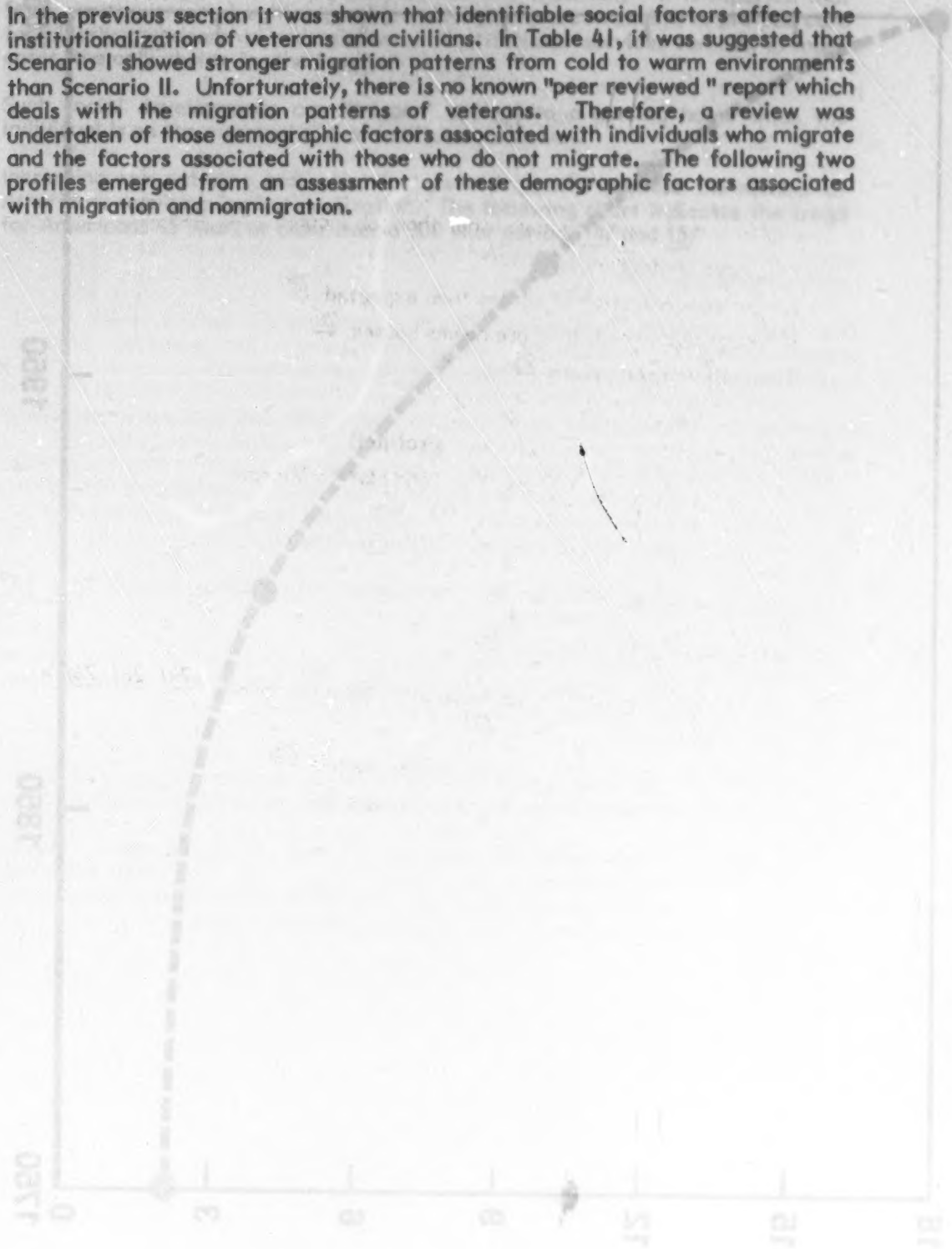
Such social developments can "trigger" entry into a nursing home when the individual is on the marginal side of institutionalization.

Increasing age patterns and social factors will greatly increase the number of Americans requiring institutionalization. The following chart indicates the trend for Americans 65 years or older over a 300 year period. 14/ and 15/


Percent of Population Over 65 Years of Age
18
15
12
9
6
3
0
Percent of Population
1750
1850
1950
2050
Year

IX. PATTERNS OF MIGRATION

In the previous section it was shown that identifiable social factors affect the institutionalization of veterans and civilians. In Table 41, it was suggested that Scenario I showed stronger migration patterns from cold to warm environments than Scenario II. Unfortunately, there is no known "peer reviewed" report which deals with the migration patterns of veterans. Therefore, a review was undertaken of those demographic factors associated with individuals who migrate and the factors associated with those who do not migrate. The following two profiles emerged from an assessment of these demographic factors associated with migration and nonmigration.



Profile A

Those Who Tend to Migrate

1 Generally below the age of 55 [24] [25] [26] [28] [29] [30]

2 Better educated [24] [28] [30]

3 Less likely to be widowed [28]

4 Higher income; tend to have other than job income [24] [25] [26]

5 Few have welfare income [27]

6 Larger concentration of whites than expected [28]

7 If houses are owned, they are newer houses [28]

8 Typically in good health [29]

Profile B

Those Who Tend Not To Migrate

1 Generally above 55 [24] [25] [26] [28] [29] [30]

2 Lesser educated [24] [28] [30]

3 More likely to be widowed [28]

4 Lower income; almost never have other than job income [24] [28] [26]

5 Many have welfare income [27]

6 Larger concentration of blacks than expected [28]

7 If houses are owned, they are older houses [28]

8 Larger number in poor health [29]

Profile C

Those Who Enter VA-Sponsored Nursing Home Care Units

1 All ages, but generally older.

2 Mixed, but generally less education.

3 More likely to be widowed, or divorced, and have broken families.

4 Lower income.

5 Many have been on welfare.

6 Larger concentration of blacks than expected.

7 Social factors are reasons to enter NHC to a large extent.

8 Larger numbers have poor health.

X. THE PROFILES OF NHC PATIENTS

Interviews were held with VA health professionals to learn of their perceptions of veterans who are found in VA-supported NHC units. Individuals in VACO (18) were the primary source of information on NHC patients.

Respondents in VACO and district health care installations were not told of the literature survey resulting in Profiles A and B. They simply were asked to comment on the institutionalization characteristics found in the health care literature. Their views are found in Profile C on the following page.

Profiles B and C have significant similarities. The results of the profile survey were reviewed by independent academic researchers with experience in migration patterns. They agreed Profiles B and C were similar and different from Profile A.

It is concluded that those veterans who are likely to enter VA-supported nursing homes are not likely to migrate to another part of the U.S. to receive NHC.

Several publications provide data on U.S. patterns of population. 30/ 31/ 32/ Collectively, these data indicate that more elderly Americans still live in the Snowbelt than live in the Sunbelt.

Several consultants in demography have commented that "reverse migration" from warmer to colder environments is now a pattern of modest proportions.

XI. A COMPOSITE VIEW OF THE CENSUS FIGURES IN THE REPORT

The graph on the following page plots the census figures for the total number of veterans requiring NHC in 1969, 1973-74, 1977, 1985, and 1990. The data are found in Tables 6, 11 and 41. Scenario III is shown only as an approximate mid-point between Scenario I and Scenario II.

- The census figures for 1969, 1973-74, 1977, and 1985, when connected, show a steady upward curve.

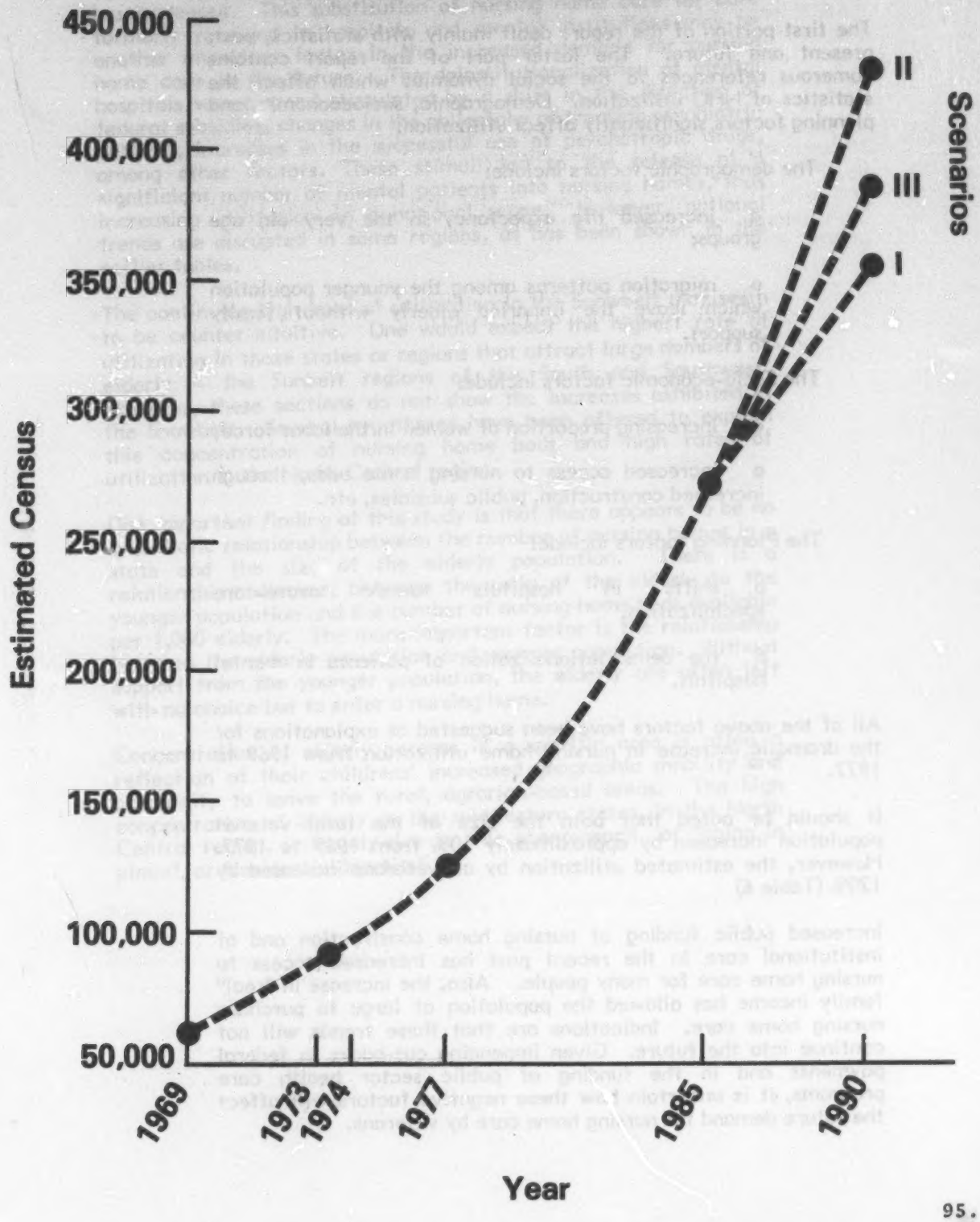
- The progression shown on the graph is consistent with a large body of social and behavioral literature on aging.

- The 1990 data for Scenario II provide the best "fit" in the graphic representation of the estimated census figures from 1969 to 1985.

best copy available

Estimated Census; Nursing Home Utilization by All Veterans

(Data from Tables 6, 11 and 41)



XII. SOME CONCLUDING OBSERVATIONS

The central focus of this report has been the utilization of NHC beds by veterans. It is therefore no surprise that the report began with utilization issues and now ends with utilization issues.

The first portion of the report dealt mainly with statistics, past, present and future. The latter part of the report contains numerous references to the social dynamics which affect the statistics of NHC utilization. Demographic, socioeconomic, and planning factors significantly affect utilization.

The demographic factors include:

- o increased life expectancy in the very old age groups;
- o migration patterns among the younger population which leave the imparied elderly without family support.

The Socio-economic factors include:

- o increasing proportion of women in the labor force,
- o increased access to nursing home beds, through increased construction, public subsidies, etc.

The Planning factors include:

- o shifts in hospitals toward acute-care specialization,
- o the deinstitutionalization of patients in mental hospitals.

All of the above factors have been suggested as explanations for the dramatic increase in nursing home utilization from 1969 to 1977.

It should be noted that both the size of the total veteran population increased by approximately 10% from 1969 to 1977. However, the estimated utilization by all veterans increased by 120% (Table 6)

Increased public funding of nursing home construction and of institutional care in the recent past has increased access to nursing home care for many people. Also, the increase in "real" family income has allowed the population at large to purchase nursing home care. Indications are that these trends will not continue into the future. Given impending cut-backs in federal payments and in the funding of public sector health care programs, it is uncertain how these negative factors will affect the future demand for nursing home care by veterans.

There has been a trend among private sector hospitals to move toward specialization and to increase the ratio of acute to extended-care beds. With fewer extended care beds available in veteran and civilian hospitals, the demand for nursing home beds has increased. This substitution of nursing home care for care formerly received in hospitals and mental institutions may be another important factor in the increased demand for nursing home care in the future. The deinstitutionalization of mental hospitals was a trend stimulated by a shift in the direction of federal subsidies, changes in the philosophy of treating psychiatric patients, increases in the successful use of psychotropic drugs, among other factors. These stimuli led to the release of a significiant number of mental patients into nursing homes, thus increasing utilization on a national scope. However, national trends are disrupted in some regions, as has been shown in the earlier tables.

The continuing high level of utilization in the Snowbelt may seem to be counter-intuitive. One would expect the highest rate of utilization in those states or regions that attract large numbers of elderly -- the Sunbelt regions of the South and Southwest. However, these sections do not show the increases exhibited in the Snowbelt. Several hypotheses have been offered to explain this concentration of nursing home beds and high rates of utilization in the North Central region.

One important finding of this study is that there appears to be no systematic relationship between the number of nursing homes in a state and the size of the elderly population. There is a relationship, however, between the ratio of the elderly to the younger population and the number of nursing home beds available per 1,000 elderly. The more important factor is the relationship between the elderly population and younger population. Without support from the younger population, the elderly are often left with no choice but to enter a nursing home.

Concentration of elderly persons in a specific area is often a reflection of their childrens' increased geographic mobility and propensity to leave the rural, agrarian-based areas. The high concentration of elderly in the midwestern states, in the North Central region, is largely due to this phenomenon of "aging in place", or "residential inertia."

Of all the antecedents of institutionalization discussed earlier, the absence of a spouse and the absence of a female relative are two of the most important. The children move out, leaving their parents to care for themselves, a spouse may die and leave an impaired spouse, or the couple may become impaired and require nursing home care. Again, this pattern is common in the North Central region.

To recapitulate an important finding - - while recent waves of retirees are migrating to the Sunbelt, thus adding to the number of elderly in those states, it is not these areas but the North and Midwest which will have the greatest need for nursing home care in 1990. These regions are losing their younger population base and with it the capacity to care for the elderly in private homes. Thus, nursing homes and other insitutions are and will continue in greater demand in the North Central region.

XIII. A NOTE ON THE MULTI-LEVEL CARE SURVEY AND NURSING HOME CARE PLACEMENTS

The data in this report focus on NHC patients in NHC units. However, NHC patients are also found in VA hospitals. The significant issue is how many NHC patients are there in VA hospitals?

It is important to analyze current and historical case-mix patterns found in VA hospitals to determine what proportion of veterans in hospitals could be more effectively and efficiently treated in nursing home units. This information, in turn, would lead to more accurate projections of future facility requirements for the agency.

Fortunately the Veterans Administration has developed surveys which consider the case-mix of care needed by veterans in VA hospitals.

The Multi-Level Care (MLC) Survey has been part of three annual censuses performed by the VA (1977, 1979, 1981). The MLC system, which describes case mix in terms of the level of care required, has the potential to provide some salient information for planners. For example, the 1979 MLC Survey included the following question: (paraphrased) If resources were available, into which facility would you discharge this patient?

In 1979 respondents in VA hospitals indicated that 8.6%, or approximately 6,000, of all VA hospital patients could be discharged into a nursing home unit, whether a VA NHC, a community nursing home, or a state home. If the VA was to support these additional 6,000 patients, the VA-supported nursing home census would be increased by approximately 30%, and the VA's market share would increase from 16% to approximately 21% (based on 1977 census data and market share data).

The 1981 MLC Survey has not been evaluated completely. However, the preliminary estimate of the 1981 survey is not significantly different from the 6,000 figure found in the 1979 survey.

For purposes of technical analysis and assignment reasons it appears proper to include the additional 6,000 veterans in the national census, but at this time case mix data are still insufficient to add these numbers to the district projections.

It is hoped that, as the MLC Survey is refined, MLC data will continue to provide helpful information for planners and that changes in casemix patterns can be analyzed and integrated into the projected district needs for nursing home care. As this and other needs assessment studies are updated, the issue of proper and efficient placement of patients will become a more central component of the analyses.

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XV. APPENDIX I

METHODOLOGY

Overall Methodological Approach:

Whether or not an individual needs NHC is determined by a complex array of socioeconomic and health-related factors. The socio-economic fabric of our society and the prevalence of chronic disease change over time, and so does the need for NHC. It follows that it would be virtually impossible to define the exact or total need for NHC at a given point in time in the future.

In order to assess the approximate need for NHC, utilization analysis and demographic analysis have been used. Briefly, the rationale behind utilization analysis is the following:

- o If accurate data are available which describe utilization patterns for nursing home care,
- o If the resources are being used appropriately, and
- o If the supply of resources is presumed to be meeting the demand,
- o Then utilization rates are a fairly accurate estimate of the need for NHC.

VA NHC data and resources are limited, but adequate data and resources are available for the civilian sector. Therefore, the male civilian experience is used as a model for the NHC need of veterans.

By developing age-specific utilization rates for male civilians and applying those rates to age-specific estimates of the veteran population, an estimate of veteran utilization of NHC can be derived. This is a form of demographic analysis. The assumption which underlines this technique is that populations with similar characteristics have similar needs. It is assumed that male civilians in a given age group will use NHC at the same rate that male veterans in the same age group would use NHC. There is no known report or publication which contradicts this assumption.

Once historical need is assessed, the future need for NHC can be projected. The projections include female component.

The following major assumptions are made in this study:

- o There will be no major wars before the year 2000.
- o The rate of NHC utilization by male civilians is approximately the same as the rate for veterans.

Methodology Used in Tables

Table 1: Methodology

The three surveys conducted by the National Center for Health Statistics sampled all nursing and personal care homes as listed in a Master Facility Inventory (MFI) which contains the names and addresses of all health facilities in the United States. It is periodically updated by the NCHS. The surveyed nursing and personal care homes are comprised of:

- o extended care facilities as certified by Medicare,
- o skilled nursing facilities as certified by Medicaid,
- o intermediate care facilities as certified by Medicaid, and
- o other facilities not certified by either program but providing a level of nursing care.

The 1969 survey also included "personal care homes without nursing," but this category was removed from the utilization subsequent surveys because it more closely resembles the VA Domiciliary Program than the Nursing Home Care Program. Table 1 summarizes the data collected by NCHS in the three study periods.

Table 2: Methodology

NCHS has divided the country into four regions for the purpose of conducting its surveys. The study data are presented by region.

Table 3: Methodology

The census figures from Table 2 are divided by the age specific civilian male population figures (in thousands) for each region. This yields a rate of utilization which describes the number of male civilians, per 1,000, male civilians, who were in nursing homes when the three NCHS surveys were conducted.

Table 4: Methodology

These overall utilization rates are derived by dividing the regional census totals by the regional population totals (in thousands). The result is a rate of utilization per 1,000 male civilians.

Table 5: Methodology

The census figures from Table 1 are divided by the age-specific male population figures (in thousands) for the entire nation. The results are the age-specific utilization rates for the nation, i.e., the number of males per 1,000 male civilians who were in nursing homes when the three NCHS surveys were conducted.

Note that the youngest age category has been redefined from 35-44 in Table 4 to 20-44 in Table 5 in an effort to include the nursing home utilization experience of younger male civilians and veterans. Data limitations preclude the development of a regional utilization rate for the 20-44 age group.

However, data are available on the national level, so this age-specific utilization rate can be developed in the remainder of the study.

Table 6: Methodology

The age-specific national utilization rates shown in Table 5 are applied to the veteran population figures (in thousands). The product of the male civilian utilization rate and the veteran population (in thousands) is an estimated census.

The term "estimated census" is used to describe any figure derived from the application of the civilian model to the veteran population. The term "census" this refers to an actual count.

Table 7: Methodology

The annual VA patient census for each study period was the sources for the numbers of veterans in VA-supported nursing homes. These figures include veterans housed in VA nursing homes, and in state and community nursing homes which are supported by the VA.

This VA-supported census yields an estimate of the share supported by the VA during the three study periods.

Table 8: Methodology

The annual VA patient census for 1977 was the source of the VA supported census. These data were provided by the Office of Reports and Statistics and included veterans housed in VA nursing homes, and in both state homes and community nursing homes supported by the VA. Note that the sum of the census figures by district differs slightly from the national census shown in Table 7. This is due to errors in the way in which veterans were classified in district evaluations.

The estimated total veteran census shown in Table 8 was derived by taking the veteran population by district and multiplying this population base by age-specific utilization rates, producing 28 sets of utilization rates. These rates are derivations of the four sets of regional rates shown in Table 3.

The sum of the estimated total veteran census by district for 1977 does not equal the estimated total veteran census nationwide for 1977, as shown in Table 6 because of slight differences in the data sources used to derive the estimated census figures. The rates used in Table 6 are national age-specific rates, whereas the rates, used in Table 8 are age-specific utilization rates, by district. In addition, the national veteran population in 1977, as shown in the VA annual report, differs slightly from the sum of the 28 medical district veteran population figures provided by the VA Controller.

Table 9: Methodology

Table 3 displays male civilian nursing home rates by age and by the four NCHS regions. Regional variation in utilization patterns exists and for a variety of reasons one can expect this to persist into the future. It is important to acknowledge this variation in projecting future utilization rates.

Since it is difficult to predict the future demand for NHC with certainty, two rates, a low and a high estimate, have been projected for each of the target years: 1985, 1990, and 2000. Both estimates are based on a simple trend analysis. The low estimate assumes that the age-specific utilization rates experienced in each region in 1977 will continue into the future.

From Table 4 it is obvious that utilization rates have increased steadily in all four regions over the three study periods, and it is unlikely that this trend will stop. However, by assuming that a utilization rates leveled off in 1977, a conservative projection is established. The high estimate, conversely, takes into account past growth and assumes this growth will continue into the future. The growth was forecasted in the following way:

> The growth trends from 1969 to 1977 were examined, and an average yearly change in growth was derived for each age group in all four regions. This average yearly growth is assumed through 1990. Between 1990 and 2000 it is assumed that the average yearly growth will be reduced by half. Thus, it is assumed that utilization rates will begin to level off at the turn of the century.

Note that the utilization rates are projected by region, and that each age-specific rate is projected as well. This allows future census estimates, developed in later tables, to be sensitive to the changing age structure of the veteran population. The total number of veterans will decrease by the end of this century, if there is no war, and the proportion of elderly veterans will increase significantly as the World War II and Korean War veterans age. Thus it is very important to use age-specific utilization rates as the basis for predicting future NHC needs.

Table 10: Methodology

As described previously, the age-specific utilization rates were projected for each of the four NCHS regions. The product of these rates, when applied to a population, is an estimated census.

The VA Controller has estimated the veteran population by medical district for the years: 1985, 1990, and 2000. It is desirable to use these age-specific population projections by medical district because the age structure varies among districts. When population data are applied to age-specific rates, the resulting census estimates are sensitive to both the changing age structure and the district variation in age structure. The rates are then projected in the four NCHS regions. In order to refine these regional projections, they have been recombined into recombined to develop 28 utilization rates.

To develop district utilization rates, it is assumed that any medical district that lies completely within one of the four NCHS regions experiences the same utilization rates as that region. Any district that lies across the boundaries of two or more NCHS regions experiences a weighted average of the regional utilization rates. The regional utilization rates are weighted by their contribution to the medical district's population.

These medical district utilization rates, when multiplied by the medical district population projections, yield census estimates by age and by district. Three estimates have been calculated: a low, a high, and a mid-point. These medical district results are voluminous and the procedure is not shown in table form. Table 11 summarized the results of the 28 medical district projections. This national summary is an overview of the census estimates for 1985, 1990, and 2000. The national utilization rates are also a derivation of the combined district results. The low and high rates are based on the same assumptions described earlier. The low estimates assume that the 1977 utilization rates have remained stable, and the high estimates assume that past growth continues into the future. One may be misled by changes in the low rates from 1985 to 2000. Recall that these rates are derived from the combined results of all districts. The national utilization rates are derived by dividing the sum of the districts' census projections by the sum of the districts' veteran population projections. The resultant national utilization rates are influenced by the shift in age strucuture of the veteran population over time. This explains why the low utilization rates do not remain constant over time.

Table 11: Methodology

The procedure by which these projections were derived has been described.

Table 12: Methodology

The procedure by which these projections were derived has been described.

Table 13 - 40: Methodology

Nursing home census projections and alternatives for the total veteran population are shown in Tables 13 and 14, respectively. Individual district shares for 1977 are also listed in Table 13. Tables 15 through 40 present five sets of VA supported nursing home census projections. Again, a low, high, and mid-point estimate is given for each of the three target years.

Table 41 - Methodology

Background:

Scenario I methodologies have been discussed in statements related to Tables 1 through 40. A companion sequence on methodologies for Scenario II is now presented. The projections for this alternative Needs Assessment study have also been developed for 1985, 1990, and 2,000. An alternative sequence of methodologies leading to the 1990 allotment levels for each of the 28 Medical Districts has been developed.

Step - 1 The 1978 veteran data from the VA Controller's Office was accepted as the base for the alternative projections. The data show the number of veterans assumed to be in each of the Medical Districts.

Step - 2 The number of veterans assumed to be in each of the Districts was converted to the percentage of the national number of veterans estimated to be living in 1978. The Controller's Office indicates total is 29,708,000. Hence, the number of veterans in a district was the numerator and the national total veterans the denominator which provided the percentage. The average percentage for a district was 3.6%.

Step - 3 The Controller's projected national veteran population for 1985, 29,331,900, was then multiplied for each of the Medical District percentages as developed on the 1978 Controller's data. There is a one time assumption that the 28 percentages developed for 1978 had not changed significantly for 1985.

Background:

It is concluded that an insignificant number of veterans will (a) first move from colder areas of the country to warmer area and (b) then eventually enter a VA NHC unit for medical care. Several demographic and sociological factors which follow enter into this judgment.

The Bureau of Census reported that the net negative migration from the Northeast and North Central regions was approximately 400,000 individuals per year from 1970 to 1979. Similarly the net positive migration to the South and West was approximately 400,000 individuals per year from 1970 to 1979.

Certain steps need to be undertaken to arrive at an estimate of those veterans who are likely to migrate and enter VA-NHC units.

Step - 4 From the net positive (or negative) migration estimate of 400,000, certain sub-population are eliminated.

All males and females to age 20 years are eliminated.

Step - 5 A small number of female veterans are included. See the comments on the page, "Introduction to the Historical Tables."

Step - 6 Eliminate approximately 84% adult males above 20 years who are non-veterans.

Step - 7 An estimate of migration and nonmigration was developed. The demographic and sociological literature indicates that individuals with little income and little education do not tend to migrate. The various migration or nonmigration patterns of veterans were converted into units or "strengths" of migration for each District.

Less than one-half of 1% of veteran 1985 totals developed for each Medical District were altered to accommodate migration patterns. The minor shifts in veterans numbers is compatible with the current literature.

The result of using the above migration methodologies is the development of the Modified Veteran Population for each of the 28 Districts.

Step - 8 Given the previous steps, an estimate was developed of those veterans who are eligible for VA NHC and where they are likely to be in 1990.

Background:

As indicated in this report, the utilization rates for Scenario I were based on the observations from 1969 to 1977 and subsequently generated by computer projection for later periods of time. The utilization rates developed by that method exhibited a positive, upward curvilinear increase from 1977 to 2000. Scenario I also includes a 50% reduction of the average yearly growth.

Step - 9 The 1990 utilization rate in Scenario II is developed by allowing the increase in rates for the 1969 to 1977 period to continue on a straight line approach to 1990. The projected national utilization rate in 1990 is 15.2/1000 males for Scenario II in contrast to the Scenario I rate of 9.4/1000 males.

Step -10 Again using the straight line approach, the utilization rates for the four Bureau of Census regions in 1990 are: Northeast - 10.4/1000 males; South and West - 13.0/1000 males; and the North Central 25.7/1000 males.

Step -11 The census for each Medical District is then obtained by multiplying the Modified Veteran Population for each District by the regional utilization rate provided above.

XVI. APPENDIX 2

OTHER STUDIES AND THEIR IMPLICATIONS FOR FUTURE VA PLANNING

There is much concern in the VA about the proper placement of patients in health care facilities in terms of:

- The quality of Care Received,
- The equitable distribution of resources, received, and
- The cost-effectiveness of care

The VA is concerned with alternative ways of patients assigning to health care facilities, even though such alternatives will affect the need for nursing home beds in the future.

Two studies currently underway may help to establish alternative guidelines for estimating the number of VA NHC needed beds in the future. When this NHC study is updated, the findings from these and other research projects will be incorporated into the forthcoming Central Office studies.

Mental Patients and Nursing Home Care: A VA Cooperative Study

This study, coordinated by Dr. Margaret Linn, of the Miami VA Medical Center, is examining the quality of care given to mental patients in three types of health care facilities: community nursing homes, VA nursing home units, and hospital psychiatric wards. The purpose of this study is to compare patient improvement status in the various facilities and determine guidelines for the proper placement of mental patients. While preliminary data are now available to the researchers, a comprehensive analysis will not be available until late in 1982, at the earliest.

The results of this study will be monitored and analyzed by the Health System Information Service in the VA and incorporated into an updated version of the current needs assessment study for NHC. The results of this study may engender new projections of the number of nursing home beds needed by the VA in the future.

The Deinstitutionalized Mentally Ill In Nursing Homes: A National Perspective

A study recently completed by D.L. Manzanares and G.L. Smith at the University of Denver Research Institute examines the mental conditions of nursing home patients in the 1977 National Nursing Home Survey. The authors suggest that a large proportion of nursing home residents have mental disorders which require specialized care. There are two important implications for the VA NHC program:

- The VA may have to accommodate more mental patients in nursing homes, given the trend of deinstitutionalization of mental patients. If so, bed capacity will have to be evaluated in light of the placement of mental patients.

- The VA should examine the services and staffing of its NHC units. If, in fact, patients need more psychiatric or psychological care, adjustments in resource planning should be made.

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